What is claimed is:

1. A method for identifying clusters in two-dimensional data comprising:

generating a two-dimensional histogram characterized by a grid having an x-axis and a y-axis and a selected number of bins in the x-direction and a selected number of bins in the y-direction, said data comprising n pairs of points (x_i, y_i), $i = 1,\ldots,n$, said histogram comprising fewer bins than said points;

determining a density estimate based on said bins; and

identifying at least one cluster in said data, said at least one cluster comprising a plurality of points which satisfy a selected density criteria.

2. A method as claimed in claim 1, wherein said determining step comprises generating a smoothed density estimate.

3. A method as claimed in claim 2, wherein said smoothed density estimate is generated using a Gaussian kernel estimator algorithm.

4. A method as claimed in claim 1, further comprising determining a boundary around said at least one cluster.

5. A method as claimed in claim 4, wherein said boundary is a polygon characterized by a plurality of vertices, and further comprising processing said boundary to reduce the number of said vertices while enclosing approximately the same area within said boundary.

6. A method as claimed in claim 1, wherein said data comprises a plurality of clusters and said density estimate is characterized by a three-dimensional plot depicting peaks and valleys, said identifying step comprising locating valleys in said

density estimate and identifying each of said plurality of clusters as being separated from the others by at least one of said valleys.

7. A method as claimed in claim 6, wherein said identifying step further comprises comparing the slope of each of said bins with that of adjacent ones of said bins.

8. A method as claimed in claim 7, wherein said identifying step further comprises:

determining which of said bins correspond to respective peaks of said plurality of clusters using said slope;

assigning said bins that correspond to said peaks with respective cluster identification codes; and

assigning each of said bins associated with one of said peaks with the corresponding one of said cluster identification codes.

9. A method as claimed in claim 8, further comprising determining a boundary around said at least one cluster.

10. A method as claimed in claim 9, wherein said step of determining a boundary comprises analyzing each of said bins to determine if adjacent ones of said bins have the same one of said cluster identification codes, said bins being labeled as exterior points if they have no adjacent said bins with said data or the same one of said cluster identification codes.

11. A method as claimed in claim 10, wherein said boundary is a polygon characterized by a plurality of vertices, and further comprising processing said boundary

to reduce the number of said vertices while enclosing approximately the same area within said boundary.

12. A method for identifying clusters in two-dimensional data comprising a plurality of points, the method comprising:

generating a density estimate based on said data;

identifying at least one cluster in said data, said at least one cluster comprising a plurality of points which satisfy a selected density criteria; and

determining a boundary around said at least one cluster.

13. A method as claimed in claim 12, wherein said generating step comprises generating a smoothed density estimate

14. A method as claimed in claim 13, wherein said smoothed density estimate is generated using a Gaussian kernel estimator algorithm.

15. A method as claimed in claim 12, wherein said boundary is a polygon characterized by a plurality of vertices, and further comprising processing said boundary to reduce the number of said vertices while enclosing approximately the same area within said boundary.

16. A method as claimed in claim 12, wherein said data comprises n pairs of points (x_i, y_i), $i = 1,\ldots,n$, and said generating step comprises:

generating a two-dimensional histogram, said histogram comprising fewer bins than said points; and

determining said density estimate based on said bins.

17. An apparatus for identifying clusters in two-dimensional data comprising:

a processing device; and

a memory device coupled to said processing device for storing a cluster finder algorithm, said processing device being programmable in accordance with said cluster finder algorithm to generate a two-dimensional histogram characterized by a grid having an x-axis and a y-axis and a selected number of bins in the x-direction and a selected number of bins in the y-direction, said data comprising n pairs of points (x_i, y_i), $i = 1,\ldots,n$, said histogram comprising fewer bins than said points, to determine a density estimate based on said bins, and to identify at least one cluster in said data, said at least one cluster comprising a plurality of points which satisfy a selected density criteria.

18. An apparatus as claimed in claim 17, wherein said processing device is programmable to generate a smoothed density estimate.

19. An apparatus as claimed in claim 18, wherein said processing device is programmable to implement a Gaussian kernel estimator algorithm to generate said smoothed density estimate.

20. An apparatus as claimed in claim 17, wherein said processing device is programmable to determine a boundary around said at least one cluster.

21. An apparatus as claimed in claim 20, wherein said boundary is a polygon characterized by a plurality of vertices, and said processing device is programmable process said boundary to reduce the number of said vertices while enclosing approximately the same area within said boundary.

22. An apparatus as claimed in claim 21, wherein said data comprises a plurality of clusters, said apparatus further comprising a user input device and a display connected to said processing device, said display providing a visual indication of said plurality of clusters, said processing device being operable to provide a user with said boundary of one of said plurality clusters when selected via said user input device.

23. An apparatus as claimed in claim 22, said processing device being operable to alter said boundary of at least one of said plurality clusters in response to user commands generated via said user input device.

24. An apparatus as claimed in claim 17, wherein said two-dimensional data represents a first data set and said processing device is operable to perform batch processing of a second data set, said processing device storing a template in said memory device corresponding to said at least one cluster in said first data set and using said template to facilitate location of clusters in said second data set.

25. An apparatus for identifying clusters in two-dimensional data comprising:

a processing device; and

a memory device coupled to said processing device for storing a cluster finder algorithm, said processing device being programmable in accordance with said cluster finder algorithm to generate a density estimate based on said data, identify at least one cluster in said data, said at least one cluster comprising a plurality of points which satisfy a selected density criteria, and determine a boundary around said at least one cluster.

26. An apparatus as claimed in claim 25, wherein said processing device is programmable to generate a smoothed density estimate.

27. An apparatus as claimed in claim 26, wherein said processing device is programmable to implement a Gaussian kernel estimator algorithm to generate said smoothed density estimate.

28. A method as claimed in claim 25, wherein said data comprises n pairs of points (x_i, y_i), $i = 1,\ldots,n$, and processing device is programmable to generate a two-dimensional histogram, said histogram comprising fewer bins than said points, and determine said density estimate based on said bins.

29. A computer program product for identifying clusters in two-dimensional data comprising a plurality of points, the computer program product comprising:

a computer-readable medium; and

a cluster finder module stored on said computer-readable medium that generates a density estimate based on said data, identifies at least one cluster in said data, said at least one cluster comprising a plurality of points which satisfy a selected density criteria, and determines a boundary around said at least one cluster.

30. A computer program product as claimed in claim 29, wherein said cluster finder module generates a smoothed density estimate.

31. A computer program product as claimed in claim 30, wherein said smoothed density estimate is generated using a Gaussian kernel estimator algorithm.

32. A computer program product as claimed in claim 29, wherein said boundary is a polygon characterized by a plurality of vertices, said cluster finder module being operable to process said boundary to reduce the number of said vertices while enclosing approximately the same area within said boundary.

33. A computer program product as claimed in claim 29, wherein said data comprises n pairs of points (x_i, y_i), $i = 1,\ldots,n$, said cluster finder module being operable to generate a two-dimensional histogram, said histogram comprising fewer bins than said points, and to determine said density estimate based on said bins.